

**ABSTRACT**

A Communication Diode Driver Circuit (CDDC) for selectively illuminating communication diodes (CDs) in response to incoming digital data pulses with a LED drive current  $I_{LED}(t)$  close to a nominal LED drive current  $I_N$  therefor in a  
5 steady state operation of the CDDC. The CDDC includes a driver unit for driving the LED drive current  $I_{LED}(t)$ , and a closed loop feedback unit for continuously monitoring the LED drive current  $I_{LED}(t)$  for providing a variable shift voltage  $SV(t)$ . The driver unit includes a shift amplifier for combining a pulsed analog data voltage  $ADV(t)$  corresponding to incoming digital data pulses, and the shift  
10 voltage  $SV(t)$ .

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